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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

JUN 25 2004

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Sindulfo Castillo
Environmental Director
Public Works Department
Naval Activity Puerto Rico
PSC 1008 Box 3021
FPO AA 34051-3001

Re: Naval Activity Puerto Rico (formerly Naval Station Roosevelt Roads),
Draft Final Sampling and Analysis Plans (SAPs) for RCRA Closure
EPA I.D. # PR2170027203

Dear Mr. Castillo:

The United States Environmental Protection Agency (EPA) Region 2 has completed its review of the four Draft Final Sampling and Analysis Plans (SAPs) for RCRA Closure of the permitted hazardous waste container storage units (HWCSUs) at Naval Activity Puerto Rico (NAPR), formerly Naval Station Roosevelt Roads. These 4 SAPs were submitted pursuant to the Closure Plan for the HWCSUs contained in the 1994 RCRA permit issued to Naval Station Roosevelt Roads. They were transmitted to EPA on behalf of the Navy by Russell V. Bowen's (of AGVIO/CH2MHill) letter of April 29, 2004.

Based on our review, EPA has determined that the SAPs are not fully acceptable, and require revisions as discussed in the enclosed Technical Review. Please submit appropriately revised SAPs, addressing all comments in the enclosed Technical Review within 45 calendar days of your receipt of this letter.

If you have any questions, please telephone me at 212-637-4167.

Sincerely,

for


Timothy R. Gordon
Project Manager
Caribbean Section
RCRA Programs Branch

Enclosure

cc: Mr. Julio I. Rodriguez, Director Land Pollution Control Area, PREQB, w/encl.
Ms. Yarissa Martinez, Office of the Chairman, PREQB, w/encl.
Mr. Russell V. Bowen, P.E., AGVIO/CH2MHill, w/encl.
Mr. Roberto Pagtalunan, U.S. Navy, LANTDIV, w/encl.
Mr. Kevin Cloe, U.S. Navy, LANTDIV, w/o encl.
Ms. Kathy Rogovin, Booz Allen & Hamilton, w/encl.

TECHNICAL REVIEW OF THE SITE-SPECIFIC SAMPLING AND ANALYSIS PLANS
BUILDINGS 1973, 2009, 2009A, 2009B, 2009C, AND 2009D
DEFENSE REUTILIZATION AND MARKETING OFFICE

NAVAL ACTIVITY PUERTO RICO
CEIBA, PUERTO RICO

REPA3-1203-032

Revised by EPA on June 24, 2004

I. GENERAL COMMENTS

1. Because the facility is located near sensitive environments (mangrove swamps), consideration of ecological receptors may be required. The sampling and analysis plans (SAPs) have not addressed potential impacts to ecological receptors in determining clean closure criteria. The SAPs should be revised to include a discussion of this. If consideration of potential impacts to ecological receptors is warranted, then the SAPs must be revised to either include recognized ecological risk-based concentrations (RBCs) as part of the clean closure criteria for the units, or indicate that an ecological risk assessment (ERA) will be completed using the analytical data collected under the SAPs.
2. Exhibit 3-2 in each of the SAPs identifies the closure standards for target constituents. For naturally occurring elements (i.e., metals), cleanup to background levels is generally acceptable, as long as the background samples are collected in similar media and in areas not impacted by contamination at the facility. Under the SAP, the background soil samples are to be collected at locations inside the DRMO yard itself (refer to Figure 4-3 of the Building 1973 SAP), which may have been impacted by contaminant releases either from the DRMO facility or adjacent waste and/or product management areas. Therefore, revise the SAPs to either: a) have the background data set be obtained outside the DRMO yard at a location less likely to be impacted by contamination; or b) have the clean closure criteria for metals in soil be based on not only background levels established inside the DRMO yard, but also on human health risk-based concentrations (RBCs), and possibly also ecological, as discussed above.
3. In addition, under the Closure Plan in the 1994 RCRA permit, the interior concrete surfaces inside the hazardous waste storage areas are to be cleaned to concrete "background" levels for both metals and organic constituents, as established by the analytical results from core samples taken from "non-impacted" concrete surfaces elsewhere in the buildings. However, since the presence of these constituents in the concrete cannot be viewed as wholly natural occurring, revise the SAPs to ensure that the clean closure criteria for all interior concrete surfaces are based not only the concrete "background" levels established inside the buildings, but also to either established risk-based concentrations (RBCs), or acceptable site-specific RBCs.

Inconsistent
w/ NAV
Review

4. The closure criteria for organic constituents in soils around the buildings are based on industrial usage criteria. While it may be acceptable to clean up based on future industrial reuse scenario, that does not constitute clean closure for unrestricted future usage, and requires institutional controls to restrict certain future usages. Future industrial use can not be assumed unless Naval Activity Puerto Rico (NAPR) intends on implementing land use controls (e.g., deed restriction to preclude future residential or similar use of the property). The SAPs must be revised to either: a) be based on unrestricted (i.e., residential) clean-up criteria; or b) provide a discussion clearly indicating the expected future site usage and the proposed institutional controls to restrict future site usage.
5. The list of constituents to be sampled and analyzed for clean closure of the units is not clearly defined. Specifically, each SAP states that Exhibit 3-1 identifies "Target Constituent List" for wastes stored in each building. Following Exhibit 3-1 in each SAP is Exhibit 3-2, which presents the closure standards for the wastes. However, not all of the constituents identified in Exhibit 3-1 are included in Exhibit 3-2. For example, for Buildings 2009B, C and D, 1,2-dichloroethene, methyl tertiary butyl ether (MTBE) and total recoverable petroleum hydrocarbons (TRPHs) are included in Exhibit 3-1 and not in Exhibit 3-2. Furthermore, the SAPs state that the target constituent list for each building is based on "operational records" for each building. Revise the SAP to include testing of all constituents that may have been stored, treated, or created during the life of the facility (including all wastes that are identified in the various Part A Applications submitted for the facility), or include a discussion of why only a limited sub-set of constituents were selected.
6. Section 3 of each SAP states that rinsewaters will be sampled to determine the "appropriate disposal method (either by hazardous waste or disposal into sewer)." However, these sampling methods have not been discussed in the SAPs. Describe the specific EPA-recognized sampling methods to be used for collecting samples from all rinsewater. For decontamination activities, the SAPs indicate that the wastes will be sampled, "either by dipping sample containers directly into the drums or by a peristaltic pump." The SAPs should clarify which method will be used, and the basis for selecting the method to be utilized.
7. The Standard Operating Procedures (SOPs) provided in Appendix B of the SAPs reference "Attachment A" for the sample label and "Attachment "B" for an example of the chain of-custody form. However these attachments have not been provided in the SAP. Revise the document to include this information and ensure that all referenced attachments are included in all SAPs.
8. Section 4.6.6 of the SAP for Building 1973 provides the shipping and packaging information for all samples. However, this same information has not been included in any of the other SAPs. Revise the SAPs for Buildings 2009, 2009A, B, C, and D to include this information, or to reference the information in the SAP for Building 1973.

9. Revise the SAP to ensure that all personnel will be trained and certified, as required by applicable regulations and/or guidance.
10. The SAPs should indicate who will provide the containers and coolers for the sampling event (i.e., laboratory or facility), and how they will ensure that all containers are contaminant-free.
11. The SAPs must be modified to indicate how long the samples will be maintained by the facility or its consultant prior to disposal.
12. Appendix B of the SAPs discuss the contents of the field logbooks. Ensure that all field notes to document field activities will be performed using indelible black or blue ink in permanently bound notebooks with numbered pages. Also, ensure that the person recording the notes will sign and date the bottom of every page in the field notebook. Finally, ensure that any changes will be crossed out with a single line so that the original text remains legible, and that the person making the change initials and dates the change.
13. The SOPs provided in Appendix B are very general with regard to the field sampling procedures. The SOPs should be detailed so that all field personnel have access to complete information during the sampling event. Specifically, revise the SOPs to include the following:
 - A more complete description of the calibration of all field equipment. For example, for volatile organic compounds (VOCs) by OVM, the SOP references the equipment manual. This is insufficient; the information should be provided within the SOP itself. Revise the information to include in the SOP, a description of the procedure, the calibration frequency, and the calibration standards used. Instruments and manufacturer's instructions and specifications may be maintained in the project files. Ensure that instruments are calibrated before being sent to the field and that field calibration results will be documented in the field logbook. Where available, calibration materials should be traceable to relevant, recognized performance standards
 - Ensure that all sample collection and storage equipment will be cleaned, stored, and handled using the necessary precautions against cross-contamination, corrosion, and damage. Discuss any restrictions for field equipment selection and use.
 - Ensure that all maintenance records that are generated will be retained, and reviewed as part of the project quality records. Maintenance activities should be documented in instrument-specific or field logbooks.

II. SPECIFIC COMMENTS

Exhibit 3-1

1. Exhibit 3-1 in each of the SAPs identifies the target constituent list for the sampling event. With each of the parameters, the table identifies the analytical method to be used for the analysis. The methods provided in this table are not consistent with the methods referenced in other tables and exhibits provided in the SAPs. Specifically, this table in each of the SAPs must be modified to identify the most recent updates to the SW-846 methods. For example, for VOCs, Method 8260B should be referenced, and for metals, Method 6010B should be identified. Revise the table to include the most recent updates to the SW-846 method and ensure that all tables throughout the SAPs provide consistent information.

Finally, Exhibit 3-1 indicates that the oil and grease parameters will be analyzed by Method "1664"; however, this is not an SW-846 method. Clarify and provide the reference document for this method. Also, revise Exhibit 3-1 to reference the updated EPA Method 1664A for this analysis.

Exhibit 3-2

2. Exhibit 3-2 in each of the SAPs identifies the closure standards for the target parameters. Revise Exhibit 3-2 in each of the SAPs to also include risk-based concentrations for metals in soils and all concrete core samples, as discussed in General Comments 2 and 3.

Field Sampling Plan

3. This section of the SAPs discusses the media types and number of samples to be collected for each building. However, the information does not specify the sampling procedure for each medium. Appendix B does provide some SOPs for some soil sampling; however, the SOPs are very general and do not indicate which samples will be collected by which method. For example, it is unclear which soils will be collected by EnCore, which VOCs will be monitored by OVM, and which samples will be collected by split spoon. Revise the SAPs to clearly identify which samples will be collected by which specific methods. Additionally, Appendix B includes the collection of soil samples by the Terra Core and Easy Draw Syringe Methods. However, it is unclear whether either of these methods are to be used for this sampling event. To ensure clarity and avoid confusion to the field personnel, include only methods that are specific to the sampling event.

Additionally, the SAPs should discuss how the excavated soil and concrete samples will be stored, and ensure that all wastes are stored on site for less than 90 days prior to off-site shipment to a permitted hazardous waste facility.

Mobilization/Demobilization

4. The SAPs state that investigation derived waste (IDW) will be generated during closure activities. However, the documents state that such wastes will be assumed to be nonhazardous. Clarify how this assumption has been made. It is understood that such wastes will be stored for less than 90 days at the facility; however, indicate if any characterization of IDW wastes will be performed prior to disposal to confirm the nature of wastes. Ensure that each IDW container will be labeled with site identification, sampling location, depth, matrix, constituents of concern, and other pertinent data for handling.

Table 4-1: Containers, Preservatives and Holding Time

5. The following discrepancies were noted in Table 4-1 in each of the SAPs:
 - Table 4-1 in the SAP for Building 1973 is incomplete. Specifically, the information for the following target parameters has not been included:
 - Cyanide to be analyzed by SW-846 Method 9012A
 - Parameters to be analyzed by SW-846 Method 8015B

Revise the table to include the container, preservative, and holding time information for these parameters.

- For metals and mercury, the tables indicate simply that Methods "6010B and 7000 series" will be used. To ensure clarity of information, revise the table to clearly specify the "7000 series" methods to be used. For example, if this is in reference to only the mercury method, then the table should be modified to identify SW-846 Method 7470A for aqueous samples and Method 7471A for soil samples.
- For toxicity characteristic leaching procedure (TCLP) aqueous metals, revise the table to include the TCLP reference method as well as the extraction holding time.
- The table indicates that soil and concrete VOCs will be sampled by and EnCore Sampler. Revise the table to reference the SW-846 Method 5035 for the EnCore Sampling method.
- The table indicates that four EnCore samples will be taken; however, the SOP provided in the SAP indicates that three will be taken. Clarify and ensure that the text and all associated appendices are consistent.

Section 4

6. An exhibit in Section 4 of each of the SAPs lists the analytical methods and parameters that are to be analyzed for during closure of each of the buildings, and the number of samples to be collected for each media. Address the following discrepancies in these exhibits:
 - Identify the TCLP method for metals analysis
 - Clearly identify the mercury methods referencing "7000 series"
 - Revise the SAPs that reference "EPA 1664" to identify the most recent method "EPA 1664A"
 - For Building 1973, include the number of samples/media and methods for cyanide by SW-846 Method 9012A, and the parameters to be analyzed by SW-846 Method 8015B, and
 - For Buildings 2009, 2009A, 2009B, 2009C, and 2009D, include the number of samples for each media, and method for PAH analysis by SW-846 Method 8310.

Sample Designation

7. This section discusses the sample numbering scheme for the samples. Each sample has a specific identification code that is identified in Exhibits 4-5 and 4-6 for the Building 1973 SAP, Exhibits 4-7 and 4-8 for the Building 2009 SAP, and Exhibit 4-6 for the Building 2009A SAP. However, codes for subsurface soils have not been identified in the schemes. Clarify and ensure that all field personnel are consistently using the same codes.

Data Quality Objectives

8. This section of the SAPs makes general statements of the definition of data quality objectives (DQOs); however, the text never specifies the DQOs for the sampling event. The SAPs do identify the media of concern, number of samples, requirements for specific analytical methods, and analyte lists. However, the SAPs do not indicate the quality control (QC) procedures and QC acceptance criteria for the project. Project-specific decision rules, implemented to determine whether or not the resulting data are usable for their intended purposes, must be discussed in this section of the SAP. Clarify and revise the SAP to include definitive DQO statements. If this information is included in other project-related documents, then the SAPs must be revised to reference these documents. If not, then the SAPs must be revised to define the project-specific DQOs. Additionally, the SAP should be revised to discuss the procedures used to assess the data quality of the acquired data.

This section of the SAP also states that, "critical data needs are identified separately from noncritical data needs." However, the SAP does not clearly specify the critical and noncritical needs that are mentioned in the text. Revise each SAP to clearly include such information.

Laboratory Methods

9. The SAPs indicate that a laboratory has not yet been chosen for the sampling and analysis event. Clarify when this decision will be made and ensure that the selected laboratory is capable of performing all analytical methods outlined in the SAP, not just the SW-846 methods indicated. For example, the oil and grease parameter will be analyzed by a non-SW-846 method.

The SAPs indicate that there may be "field-generated data" that are produced for the sampling event. Clarify what field measurements may be made and indicate if there is a need for an on-site laboratory to perform such analyses.

Finally, the SAPs do not provide the analytical QA objectives for any of the parameters. Revise the SAPs to include this information and ensure that the laboratory selected is able to fulfill such outlined objectives.

Data Validation

10. The SAP references "*The National Functional Guidelines (1994)*" for the data validation guidance to be used for the sample results. Revise the SAP to clearly provide separate document references for the organic and inorganic parameters and ensure the most recent updates of these documents are used. Specifically, the SAP should be revised to include the following references: *U.S. EPA (USEPA) Contract Laboratory Program National Functional Guidelines for Organic Data Review (1999)* and *U.S. EPA Contract Laboratory Program National Functional Guideline for Inorganic Data Review (July, 2002)*. This ensures that all validation will be performed using consistent guidelines.

The SAPs state that, "raw data will be provided for at least 10 to 25 percent of the data." Clarify this statement and indicate who decides what percentage of raw data will be validated and how this decision is made. Clarify what percent of the data will be validated and at what level. For example, for clean closure certification, it is recommended that 100 percent of the data be validated by an independent third party.

The SAPs state that, "a data review sheet will be completed for each data package." Revise the SAP to include an example of a data review sheet.

It is understood that an electronic data deliverable which includes all data validation qualifiers will be submitted. Clarify if, in addition to such a deliverable, a hard copy data validation report will also be submitted to the project files.